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Montana Department of Health
and Environmental Sciences

Monthly Activities Report
of the Air Quality Bureau

September, 1978

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1. Highlights:

Most of September was spent working on the proposed ambient air quality rules.

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2. Ambient Air Quality Network:

a. Standards Exceeded:

	Mill Creek	Hiway Jct.	Lincoln School
Highest 24-hour avg.	0.26	0.24	0.15
Highest 1-hour avg.	0.92	1.53	0.75
# of 1-hr. avg. over .025	18	41	15

SO_2 violations near East Helena

	Microwave	East Station	Broudy
State 1-hour	0	0	1

State 24-hour - None
Federal 3-hour - None
Federal 24-hour - None

SO_2 violations from company stations near Anaconda Smelter

State 1-hour	131
State 24-hour	24
Federal 24-hour	16
Federal 2-hour	17
Total	192

Hi-vol standards exceeded:

City	Station	Date	150 ug/m^3 State Std.
Billings	Central Park	9/27	159
Columbia Falls	Anders	9/18	169
Columbia Falls	Anders	9/23	186
Columbia Falls	Anders	9/29	180
East Helena	Hastie	9/26	205
Kalispell	Strom	9/29	207
Libby	Brown	9/11	256
Libby	Brown	9/18	412
Libby	Brown	9/23	152
Libby	Brown	9/29	684

b. Air Stagnation Advisories - None for September

c. Laboratory Status

Total samples for month 280
Total determinations for month 2273

d. Developments

A new hi-vol was installed in Thompson Falls
The hi-vol was removed from the site in Three Forks
A dichotomous sampler was installed in Great Falls and also one in Polson
A hi-vol was installed in Ronan for the Flathead Valley study.

3. Permits and Tax Credits:

a. Construction Permits - applies for:

Meyer Construction, Ravalli, Co., hot mix asphalt plant
Meyer Construction, Madison Co., portable gravel crusher
Meyer Construction, Madison County, hot mix asphalt plant
Kanta Products, Inc., So. of Three Forks, equipment for manufacture of shale
Louisiana Pacific Corp., Missoula, tepee burner
Baltrusch Construction, Chouteau Co., portable gravel crusher
Rumin Activator Feeds, Three Forks, chicken manure plant
Baltrusch Construction, Chouteau Co., portable gravel crusher
Department of Highways, Blaine Co., hot mix asphalt plant
Exxon, Billings, installation of particulate collection device on coker

Approved:

McIntyre Construction, Jefferson Co., portable hot mix plant
McIntyre Construction, Jefferson Co., portable gravel crusher
Meyer Construction, Ravalli Co., hot mix asphalt plant
Meyer Construction, Madison Co., hot mix asphalt plant
Baltrusch Construction, Chouteau Co., portable gravel crusher
Baltrusch Construction, Chouteau Co., portable gravel crusher
Department of Highways, Blaine Co., hot mix asphalt plant

c. Tax Credits

Thirty-two applications are presently being reviewed (from Exxon, Cenex, and Conoco).

4. Variance Status:

a. Current

Hearing has been scheduled for Anaconda Company SO_2 variance on November 16, 1978.

b. New - None

5. Enforcement Actions:

A. Citations:

Cominco American, Inc., Garrison - 780921-BR-1, no permit, violation of rule 16-2.14(1)-S1400 (Permits, Construction and Operation of)

Baltrusch Construction, Chouteau Co., 780911-HK-1, no permit, violation of rule 16-2.14(1)-S1400 (Permits, Construction and Operation of)

Helena Sand and Gravel, Helena, 780901-HK-3, Hot Mix Plant in Violation of rule 16-2.14(1)-S14082 (Standards of Performance for New Stationary Sources, Asphalt Concrete Plants)

Montana Highway Department, Helena, 780901-HK-1 and 780901-HK-2, hot mix plants, (two), in violation of rule 16-2.14(1)-S14082 (Standard of Performance for New Stationary Sources, Asphalt Concrete Plants)

Exxon Co., Billings, dust from coke stacker, in violation of Rule S1440, Particulate Matter, airborne.

b. Notice of Violation - None

c. Orders - None

d. Court Action - None

6. Tepee Burner and Open Burning:

No. at start	41
New starts	0
Shutdowns	0
No. at end	41

Open Burning:

Kalispell Office	150	Cascade Co.	7
Lake Co.	34	Yellowstone Co.	23
Sanders Co.	84	Rest of State	411
Missoula Co.	34	Total	743

7. Source Tests Performed:

a. Agency Source Tests - None

b. Non-agency source tests

Peter Kiewit, asphalt batch plants, Billings airport, EERC, failed
Corette Station, Billings, particulate source tests

8. Field Investigations:

Deamod Asphalt Refinery, Chinook, open burning, investigation
Corette Plant, Billings, opacity, in compliance

9. Complaints:

Street dust, Shelby, letter sent to Mayor
Brand S Lumber, Livingston, smoke, investigation
Valley Center Road, Bozeman, dust, investigation
Montana Power Company, Billings, smell, dirty plume, investigation (3 complaints)
C & C Plywood, Kalispell, soot, under investigation
Cominco, Garrison, haul road dust, investigation
Fairgrounds, Hamilton, open burning, referred to sanitarian
Cominco, Garrison, dust, company to oil road
Exxon, Billings, black cloud, citation issued
Drummond, slash burning, heavy smoke, referred to monitoring
Empire Sand & Gravel, Columbus, dust and plume, investigation
Montana Sulphur, Billings, strong gas odor, investigation, burning out boiler prior to start up
Cenex, Laurel, black smoke, investigation
Exxon, Billings, 5 complaints about strong odor

10. Data Processing Services:

a. Ambient Data Summary: See attached for month of August

b. Emission Inventory Status:

All sources in non-attainment areas have been updated

c. Prevention of Significant Deterioration:

A great deal of work was spent on preparing PSD rule and in attending meetings on the rule. A public meeting was attended in Wolf Point to discuss EPA regulations with the local citizens.

d. Modeling

Met with Richard Krablin, ERT, on ANaconda Company modeling. Preliminary results were discussed.

Met with Don Henderson, EPA, on applicability and selection of models for Montana. Final list of models was produced and their use for each area of concern was discussed.

11. Environmental Impact Statements:

a. Agency Impact Determinations - none

b. Other Agency EIS's reviewed:

Spring Creek EIS, NERCO, Department of State Lands
MONTCO, Department of State Lands

12. Status of Studies, Contracts and Reports:

MAPS, monitoring about 50% complete
Historical Emission Inventory decision to terminate or continue with Phase II will be made by November 14, 1978
Emission Inventory Update, Phase II 30% complete
Montana Foundation for Medical Care has nearly completed collecting clinical record data
Network Review - 30% complete, goals set for "ideal" site selection
Poplar River Study - continues to operate well; new meteorologist has been hired for study
Flathead Study - continues to operate well

13. School and Training:

Atmospheric Sampling Course presented by EPA was attended by the two equipment and repair instrument workers in Kansas City for five days

14. Public Hearings and Meetings:

a. Public Hearings Held

Board of Health hearing, Burlington Northern variance on open burning rule

b. Meetings Attended

Richard Krablin, ERT, Anaconda Company modeling, Helena
Carroll College professors regarding data reduction for ASARCO, Helena
Lt. Governor, PSD presentation, Helena
Don Henderson, EPA, modeling, Helena
Local citizens, PSD, Wolf Point
Bill Basbigill, EPA, regarding SAMWG and Eastern Montana Energy grant, Helena
Smoke Management Unit, Missoula
Columbia Falls City Council, regarding SIP, Columbia Falls
U.S. Forest Service, Missoula
Anaconda Company representatives, proposed smelter emission stipulation
Lt. Governor, Anaconda Company negotiations, Helena
Westmoreland Resources, two operating permits, Helena
Burlington Northern representatives, variance hearing, Helena
Airshed meeting, Anaconda
Anaconda Company monitoring people, Anaconda, audit of Junction Station
MONTCO, monitoring, Helena

c. Intra-staff meetings

MAPS
MAAQS
Air quality staff meeting
Meeting with legal on rules and MONTCO
Meeting with city-county people regarding network review

15. Public Information Requests:

Rules 7
Clean Air Act 1
Other Proposed rules sent out
Interview on Butte SIP - newspaper

16. NA

17. Other

EPA audit of Air Quality Bureau enforcement files

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

Monthly Summary of Air Quality Data

August 1978

Pollutants: Miscellaneous Indicators — Units: mg/sq.dm/30 days

AQCR	Area Location	Current Month	Year-to-Date	Running Year	Arithmetic Aver. Year-to-Date	Arithmetic Aver. No. of Months of Data	Comments
	Fluoride Papers						
111	LSE Stauffer - Silver Bow Co.	5.500	5.500	5.500	0.295	2	
	S of Stauffer - Silver Bow Co.	2.170	2.520	2.520	1.995	2	
	Stauffer Pond - Silver Bow Co.	1.060	2.070	2.070	0.565	2	
	Ramsay West - Silver Bow Co.	0.910	1.120	1.120	1.015	2	
114	Bellbems Mt Rev. - Flathead Co.	1.680	1.680	1.680	1.142	8	
	Anaconda South - Flathead Co.	18.150	21.150	21.150	12.390	8	
	Glacier Park #1 - Glac.Nat.Park	0.520	0.640	0.640	0.490	8	
	Glacier Park #2 - Glac.Nat.Park	0.690	0.690	0.690	0.587	8	
	Glacier Park #9 - Glac.Nat.Park	0.720	0.720	0.720	0.554	8	
	Fluoride Plates	mg/sq.dm/30 days					
111	Anaconda South - Flathead Co	20.220	22.990	22.990	16.641	8	
	Trailer ANC - Flathead Co	2.000	2.820	2.820	1.606	8	
	Glacier Park #1 - Glac.Nat.Park	0.840	0.840	0.840	0.560	7	
	Glacier Park #2 - Glac.Nat.Park	0.690	0.690	0.690	0.390	8	
	Glacier Park #9 - Glac.Nat.Park	0.670	0.670	0.670	0.431	8	

Pollutants: Miscellaneous Bubbler Data — Units: ppb

AQCR	Area Location	High Reading Current Month	High Reading Year-to-Date	High Reading Running Year	Arithmetic Aver. Year-to-Date	Arithmetic Aver. No. of Months of Data	Comments
	Sulfur Dioxide						
140	Farm E. of Conex - Laurel	0.0099	0.0337	0.0337	0.0083	2	
143	Scobey - Daniels Co	0.0	0.0	0.0	0.0	8	
	Fort Peck - McCone Co.	0.0	0.0	0.0	0.0	8	
	Lame Deer - Rosebud Co.	0.0	0.0	0.0	0.0	8	
	Nitrogen Dioxide						
140	Scobey - Daniels Co.	0.0	0.005	0.005	0.001	8	
	Fort Peck - McCone Co	0.0	0.0	0.0	0.0	8	
	Lame Deer - Rosebud Co	0.0	0.0	0.0	0.0	8	

Pollutants: Miscellaneous Indicators — Units

AQCR	Area Location	High Reading Current Month	High Reading Year-to-Date	High Reading Running Year	Arithmetic Aver. Year-to-Date	Arithmetic Aver. No. of Months of Data	Comments
	Rainfall-tons/sq. mi						
111	Mountain States - Great Falls	2.35	2.29	80.64	20.41	6	
	Fire Sta #1 - Great Falls	13.00	26.99	31.17	14.55	6	
	10th Ave. South - Great Falls	0.88	0.88	64.89	42.75	4	
	Sulfation Rate - mg/d/100 sq. cm						
140	S/B Bile NE Coop - Billings	0.710	3.540		1.767	7	
	E. of Laurel - Billings	0.400	2.800		1.103	7	
	In-Bail Trucking - Billings	0.480	1.890		1.110	8	
141	Stock Car Track - Great Falls	0.055	0.184		0.086	7	
	Phillips Ref N1 - Great Falls	0.037	0.384		0.142	5	
	Phillips Ref E - Great Falls	0.138	0.615		0.251	7	
142	Microwave - East Helena	0.150	0.400	0.600	0.167	7	
	East Stack Sta - East Helena	0.210	0.590	1.060	0.358	6	
	Broudy Ranch - East Helena	0.100	0.460	0.480	0.170	8	
	2121 S. Pacific - East Helena	0.530	0.400	1.170	0.286	7	
	525 Prickly Pear - East Helena	0.1	0.240	0.240	0.148	5	

Pollutants: Total Suspended Particulate — Units: ug/cu meter

AQCR	Area Location	High Reading Current Month	High Reading Year-to-Date	High Reading Running Year	Arithmetic Aver. Year-to-Date	Arithmetic Aver. No. of Months of Data	Comments
140	Morton-Becker - Big Horn Co	**	**	**			
	Warren Ranch - Big Horn Co.	100	100	100	27.8	8	
	Lockwood School - Billings	***	***	***			
	KGHL - Billings	84	87	87	41.1	8	
	City Hall - Billings	12	175	175	70.7	8	
	Grand Ave.School - Billings	89	171	171	63.0	8	
	Central Park E - Billings	142	183	183	94.6	4	
	Central Park W - Billings	196	196	196	90.9	4	
	Laurel Jr. High - Laurel	69	105	106	46.2	8	
141	Hospital Roof - Great Falls	115	136	136	53.1	8	
	Fire Sta #1 - Great Falls	110	125	151	71.9	8	
142	HiWay Jct - Anaconda	43	94	161	29.3	8	
	Lincoln School#1 - Anaconda	57	65	65	36.1	5	
	Lincoln School#2 - Anaconda	61	77	77	37.1	5	
	McKinley Res - Granite Co.	80	267	267	56.9	8	

** - no valid sample submitted

*** - data unavailable at time of report

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

August 1978

Pollutant: Total Suspended Particulate Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
142	Greeley School Butte	92	105	133	77.4	8	
	Tilcney Res Silver Bow Co.	74	70	80	28.6	8	
	Richer Res Silver Bow Co	15	50	84	21.5	8	
	Hebgen Park #1 Butte	93	133	133	51.9	5	
	Hebgen Park #2 Butte	87	106	106	55.1	5	
	Dr. Canty Res Butte	70	106	106	49.9	4	
	Microwave Jefferson Co	45	52	64	26.2	8	
	212 E. Pacific Lewis & Clk Co	129	170	192	91.7	8	
	Kober Res Three Forks			*			
	Cogswell Bld #1 Helena	65	234	234	57.2	8	
143	Glendive Dawson Co	45	46	46	25.5	8	
	Lame Deer Rosebud Co			**			
	Fort Peck McCone Co	39	47	53	16.8	8	
	Broadus Powder Riv.Co	48	51	51	23.7	8	
	BN Site Colstrip	91	91	91	38.0	8	

* - site no longer submitting data
** - no valid samples submitted

Pollutant: Total Suspended Particulate Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Border Site Scobey	40	40	65	16.4	8	
144	Anders Res Columbia Falls	375	426	476	145.2	8	1 exc.Fed.Pri.St
	Courthouse Roof Missoula	204	390	390	93.4	8	3 exc.Fed.Sec.St
	Lion's Park Missoula	118	676	676	105.8	8	2 exc.Fed.Sec.St 1 exc.Mt.Pri.Std
	JB Field Missoula			***			
	Hoerner Wald #1 Missoula Co	72	144	144	31.1	8	
	Hoerner Wald #2 Missoula Co	74	135	135	34.0	8	
	Hoerner Wald #3 Missoula Co.	57	125	125	26.9	8	
	Troy-Brown Lincoln Co	95	247	247	72.3	8	
	Troy-Sampson Lincoln Co.	43	45	45	18.8	8	
	Libby-Brown Lincoln Co	193	394	394	129.4	8	2 exc.Fed.Sec.Std
	Sherman Res Kalispell	294	411	411	115.1	8	1 exc.Fed.Pri.St

*** - data unavailable at time of report

Pollutant: Miscellaneous Continuous Data Units ppm

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Carbon Monoxide						
140	27th & Montana Billings			-*-			
141	10th Ave. South Great Falls			-***-			
142	Alpine West Butte	3.00	12.50	14.00	0.694	8	
	Hebgen Park Butte	2.60	2.60	2.60	0.241	1	
144	Malfunction Jct Missoula			-***-			
	Hydrocarbons						
140	27th & Montana Billings			-*-			
142	Hebgen Park Butte			-***-			
144	Lion's Park Missoula			-***-			
	Nitrogen Dioxide						
140	27th & Montana Billings			-*-			
142	Hebgen Park Butte			-***-			
144	Lion's Park Missoula			-***-			

* - site no longer submitting data
*** - data unavailable at time of report

Pollutant: Miscellaneous Continuous Data Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Ozone						
140	Central Park Billings	0.11	0.11	0.11	0.021	5	
142	Hebgen Park Butte	0.08	0.08	0.08	0.032	5	
144	Lion's Park Missoula			-***-			
	Sulfur Dioxide						
140	Central Park Billings	0.08	0.08	0.08	0.006	2	
	Laurel Farm Billings			-***-			
142	East Stack Sta East Helena	0.24	0.48	0.66	0.007	8	
	Microwave East Helena	0.18	0.42	0.98	0.008	8	
	Broady Ranch East Helena	0.21	0.80	0.88	0.008	8	
	C-Hill Anaconda			-**-			
	HiWay Jct Anaconda			-***-			
	Mail Creek Anaconda			-***-			
	Lincoln School Anaconda			-***-			
	Hebgen Park Butte	0.08	0.08	0.08	0.007	1	

** - equipment down, no valid data
*** - data unavailable at time of report